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ABSTRACT

Five current theoretical approaches to second language learning are examined: practice, problem-solving, creative construction, monitoring, and personality development. The points in each approach that are most controversial and those that require further clarifying research are reviewed. It is concluded that in at least three major areas, practical questions that teachers have to consider for every course, are given almost no illumination by these psychological theories and the associated empirical studies. Those areas include (1) the point at which a learner shifts from learning items in a series to integrating information into an effective communication instrument, (2) the relationship between language awareness in general and language learning; and (3) the transition between contexts of learning and contexts of use, or transfer of training. (MSE)

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LANGUAGE LEARNING AND ACQUISITION PROCESSES: HOW CAN AND DO PEOPLE LEARN?

STEVEN McDONOUGH

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6. Language learning and acquisition processes: how can and do people learn?

Steven McDonough

It is natural enough to ask how people learn foreign languages. However, the recent history of the attempts to answer the question have shown, if nothing else, that we need to be quite careful about knowing why we want to know, what kind of answers will satisfy those reasons, how we can find out, and what use the anwers could be put to.

Theories of learning, like theories of most complex phenomena, tend to use analogy and metaphor, making specific predictions and then hoping to test the predictions against behavioural data. However, in the field of second and foreign language development there have been, in relatively quick succession, a number of theoretical advances which have not been elaborated fully enough to check their internal validity, and consequently have not received crucial tests. It is not surprising, therefore, that the field is in some degree of turmoil and that the relation between theory and the practice of teaching is in some ways a strained one. In a way there are too many theories; a practitioner could find it too easy to discover some theoretical justification for particular teaching decisions without having compelling reasons to reject others.

Hence my plea for the need for care: we should decide if the psychological information about learning processes is to be used to suggest new techniques of teaching or to understand how techniques in use actually work. Tempting as it is to claim that the first of these should be the goal, I do not think that this is in practice what should happen. Techniques of teaching and learning are more numerous than theories of psychology; techniques derived from theory are rarely new. It is quite possible to 'discover' techniques from a theory of second language acquisition only to find that it is what teachers have been doing for some time. This is a danger which Krashen and Terrell's The natural approach (1983) seems to court with insouciance, with its suggestions for planned communicative activities. However, theoretical understanding of the processes can and does sharpen our ideas of what existing techniques imply, how they can be combined, and what likely results they may have.

The title of this paper includes a small puzzle which I will leave aired but unsolved. What a learner does is presumably only a small part of what he or she can do. The learner can learn in a variety of ways; most learners only use a selection of these to complete the

task set. For example, they may adopt conscious learning strategies like vocabulary list learning; grammar-book-style layout of the 'principal parts' of verbs etc; or concentrate on free practice as much as possible; or try to make sense of the vocabulary through the morphology or even the history of the words; or write out examples repetitively; or learn chunks of texts by heart; or just let the constant sound of the language around them wash into them, as it were. However, some of these ways may be more efficient or productive than others: one task of second language learning research is to compare them and make recommendations. In this paper I shall be more concerned with how learners <u>can</u> learn; what they actually <u>do</u> must depend on constraints of situation, task, resources, and individual preference.

During the latter part of this century there have been five main answers to the question in the title, and I shall organise the rest of this paper around the five, spending most of the time on the more recent. I shall then try to indicate some problems which, as a practising language teacher, I find these theories help me to understand, and also some where I find they do not touch and where new research should be initiated. The five have been:

1. practice
2. problem-solving
3. creative construction
4. monitoring
5. personality development.

Perhaps the oldest of these answers is the belief that <u>practice</u> at speaking and hearing the language in a strictly planned manner leads to mastery of the structures of the language. The audio-lingual and audio-visual theorists borrowed the results of earlier psychological work by E Thorndike and C L Hull and argued that 'drilling' produced learning by raising the response strength of particular language habits. Response strength was increased by the frequency of reinforcement for the particular bond between stimulus and correct response. The whole theoretical apparatus was neatly destroyed by W Rivers in 1964, using evidence both from within psychology (that, for example, learning takes place even in rats without reward) and from within language teaching (that, for example, pattern drills did nothing for the affective demands of the pupils). This was not to say that nobody learnt languages by the audio-lingual method, but that the explanation given for their learning was at best incomplete and at worst simply wrong.

In the 1960s and 1970s there was a resurgence of interest in the

ideas of problem-solving and concept attainment as a possible clue to language learning. Several authorities (e.g. Chastain (1971), Dakin (1973)) argued that languages were learned at school age and above not by a mindless process of stamping in patterns but by a conscious inductive process of rule formulation and elimination of disconfirmed hypotheses. Interestingly this post-dated Chomsky's (1965) rejection of the concept attainment explanation of native-language acquisition, and therefore registered a clear division between those who believed that first and second language development were in principle the same and those who did not. Chomsky had two arguments against the concept attainment theory. Firstly, most versions of it require the use of negative information; that is, examples of what the concept is not, to constrain hypothesis-testing, and there is no evidence of children deliberately producing wrong examples for testing purposes. Secondly, he argued that the language the child is exposed to is too full of false starts, disguised grammatical distinctions and so on, for the child to be able to isolate what is significant to base a concept on without some kind of inbuilt prior knowledge.

However, Chastain's version of the problem-solving idea emphasised conscious mastery of given rules before their application to fluent performance. Thus, it was open to Carroll's rather laconic description of cognitive code as 'updated grammar translation'. Dakin's use of concept attainment also adapted the ideas of discovery learning (originally proposed by Kersh and Wittrock (1962) as a motivational adaptation of stimulus-response theory). His statement of what he called 'cognitive' method contained two important assumptions. The first was that learners consciously try to make sense of language data by formulating a rule of thumb to explain it to themselves and help them remember the general principle. He proposed that the language data could be so ordered by the teachers as to control the kinds of hypothesis the learner will invent and reject. That people can do this - both the arrangement and the hypothesis testing - is true, but whether they would naturally do it for language learning is debatable. However, the whole edifice of error analysis is built round this principle of hypothesis testing. His second assumption was that having learned to perform correctly according to these 'rules' there would be a change, and that with time, exercise and familiarity, learners would become proficient speakers who would perform 'as if' according to the rules, but not using the rules consciously. In other words, rule-governed fluency would become something akin to Sprachgefühl rather than a conscious process - and might therefore feel to the speaker like a first language. Unfortunately, although there is a certain amount of corroborating evidence for this process of integration and smooth, unconscious running of consciously learned operations in the skill acquisition literature (Welford, 1968), there has been no direct test of it in the language learning context.

The first two models were oriented very much to the management of

teaching in relatively formal situations. The next one was set up to account for the performance of children who had developed a partial proficiency in English as a second language in relatively informal situations like the community, the street, and the playground, as well as, for some of them, English as a second language classes.

The creative construction process was suggested originally by Dulay and Burt (1974) as an explanation for the appearance of what looked like a 'natural order' of acquisition of 11 grammatical morphemes of English. In that cross-sectional study, there appeared to be patterns of priority in which no child could get a plural in -s correct (e.g. cats) if he could not get pronoun case (he/him) right, and no child could do the irregular past tenses without being able to do those two. In fact the morphemes fell into three groups. Similar data has been presented by numerous authors and reviewed by Krashen in 1977 (reprinted in Krashen (1982), p 13), who has tried to extract an 'average natural order' from a large number of studies. The studies have used a variety of methods ranging from a picture and question test (Dulay and Burt - the Bilingual Syntax Measure), writing tests (Larsen-Freeman, 1975), oral production (Fathman, 1975 - SLOPE test), to multiple-choice questions and cloze procedure. This last, by Hyltenstam (1977), used a different method of analysis as well, which was sensitive to variable performance in the sense of the sociolinguist's variable rules, and found an 'implicational hierarchy' for learners' attempts to master negative placement in Swedish. The nature of the creative construction process itself has, however, not been widely explored, as it seems to be considered sufficient to assume that it is the re-activation of the process by which the first language is acquired, and this was assumed to be Chomsky's 'Language Acquisition Device'. The similarity between the orders of acquisition of grammatical morphemes is not total, and differs between testing method with second language learners and between learners of the same language as a first and a second language. It is therefore possible that, at least in the second language case, an observed order of appearance is the result of some 'natural' order of difficulty in the language or of some exigencies of the exposure to the language received by the learner.

The currently most popular theory of second language development, the Monitor Model of S Krashen, attempts to resolve many of these issues in a theory consisting of five basic assumptions. The most detailed account of his theory is contained in Krashen (1982). The five basic assumptions are:

1. learning is distinct from acquisition

2. the Natural Order hypothesis

3. the Monitor hypothesis

4. the Input hypothesis

5. the Affective Filter hypothesis.

The claim that language learning and language acquisition are distinct processes is probably the least controversial of these hypotheses. Many teachers have believed for years that school-age pupils can learn in a different way from young children learning their first language. Where Krashen differs from both this view and the 'creative construction' process view is in his idea that both processes are available for second language learners. For him, the processes are distinct because acquisition leads to intuitions of grammatical correctness while learning leads to rule-formulation. In a sense he accepts both the arguments of the cognitivists and those of Dulay and Burt and others, but wishes to keep their roles separate in a two-factor theory. He cannot, of course, accept the view that rule formulation by hypothesis-testing can lead to performance without conscious manipulation of the rules, as assumed by Dakin, because that would nullify the sharp distinction he finds it necessary to draw. Acquisition is a result of a creative construction of grammars from exposure to the language; learning can only take place in 'formal' learning contexts where there is rule isolation by syllabus and feedback to the student on his success. The argument is that in most teaching contexts elements of both formal and informal teaching are present. As has been pointed out by many critics, notably McLaughlin (1978), a crucial distinction which rests only on the conscious/unconscious dichotomy is, however, unverifiable: how can we ever know whether learners are operating by rule (conscious) or by feel (unconscious)? It may be that they 'feel' a particular sentence is wrong, but also know the rule, having forgotten the correct formulation of it. A pertinent analogy would be the crossword enthusiast who gets the answer to some clue before being able to work out exactly why it is the answer - but his mind might have gone through the argument 'unconsciously'!

The arguments put forward about the Natural Order hypothesis are precisely those surrounding the creative construction hypothesis mentioned earlier. Natural orders result from acquisition; 'unnatural' orders, like those found by Larsen-Freeman (1975) in writing tasks, but not so labelled by her, are deemed the result of the interference of learned rules, because of focus on accuracy and time for second thoughts. This variability is used as evidence for the Monitor hypothesis discussed below, but we should note that there needs to be independent evidence for the Monitor before it can be used, in turn, as a viable explanation for the variability of orders of appearance or difficulty. Apart from this variability of orders of acquisition, the assumption of the creative construction process is made more dubious by the almost complete lack of specification of what actually occurs. It is assumed that first language acquisition processes are re-activated, but there is no statement of

what these may be, and the first language research field is itself in turmoil currently with no clear and powerful theory emerging. The most powerful arguments against the existence of natural hierarchies were brought by Rosansky (1977), but these seem to have been overridden in the general enthusiasm.

The Monitor hypothesis - that 'learning' contributes a consciously constructed set of rules about the 'easy bits' of language, which can only act as an output filter on the predictions of the unconsciously acquired language system - is more controversial still. Not because the process of monitoring is not familiar: in one sense we do it all the time when speaking (experiments with delayed auditory feedback have shown that hearing your own voice through earphones about a tenth of a second after you have spoken rather than instantaneously, as normal, leads to nearly total breakdown of the ability to control speech, because the immediate feedback necessary for fine tuning is interfered with), and in another we often encourage our students to check what they have written and review what they are saying for considerations of formal accuracy; but because of Krashen's insistence that the learned system is always restricted to a monitoring role, and is never an initiator of utterances, and that learned knowledge can never 'seep' into the unconscious acquired system. 'Seepage' cannot be allowed in the theory because it obviously destroys assumption 1, but it is a familiar phenomenon from introspective reports of language learning (Cohen and Hosenfeld (1981), particularly on vocabulary learning strategies). Krashen's Monitor raises several questions, therefore, on which further research is very much needed. The question of seepage is theoretically important because of the 'cognitive' explanation of the Sprachgefühl problem mentioned above, and because at least one authority (Stevick, 1980, ch. 21) has pointed out both anecdotal and empirically tested reasons why something of the sort must occur. The question of monitoring being a 'natural' process in the sense that Piaget's Formal Operations stage of cognitive development is a perfectly 'natural' process, while its effect according to Krashen is to interfere with the 'natural' acquisition of language, is important. The question of whether monitoring is dependent on teachers' explicit or implicit training of students' learning strategies needs investigation. A fourth question is whether monitoring is just one of a number of learning strategies, as suggested by Bialystok (1979). In fact, none of these questions can be answered without a much richer conception of 'learning' and 'monitoring' than Krashen has yet provided.

The Input hypothesis is the claim that students' acquisition processes work only on 'comprehensible input'. The idea is in effect borrowed from the first language acquisition field, one part of which has been concerned with the adaptation of parents' language when talking to their children so as to use structures, vocabulary and ways of expression which are 'roughly tuned' for the child's

presumed level of competence. Of course, if the tuning goes awry, the channel of communication breaks down. In the second language case, it suggests two important principles. Firstly, acquisition is dependent on the 'quality' of the available input, i.e. how well the teacher and other suppliers of language can use the initially rather narrow band of language which the learners can understand, while also introducing some elements which are just beyond them. Studies of classroom discourse have been looking at this question for many years, and disappointingly have not yet produced any very powerful generalisations about the particular ground-rules and salient features of teacher-student talk which contribute to acquisition. Secondly, acquisition is dependent upon an initial 'silent period' and not on active performance in the language. Thus pattern drilling from day one never gave a chance for acquisition in Krashen's sense to take place. How this claim relates to the claim that it is only the acquisition system that can initiate utterances is not clear, except it is an odd refutation of the old principle - not unsupported in the literature - that one learns by doing.

In fact, it is definitely not clear that 'comprehensible input' is a function of the language exposure alone: the acquirers/learners also negotiate input for themselves. Meaning, after all, even for the young child, is negotiated between the child and its conversation partner. Topics have to be agreed upon - even with the child taking the lead. Tarone (1980) has pointed out that there are communication strategies, production strategies, and learning strategies, and that they are not all the same thing. She has also pointed out that not all communication strategies are also learning strategies, and many learning strategies do not involve communication - like private study of word lists: she states that (p 421) only further research can sort out the muddle. Long (1983) also reminds us that learners expend considerable effort in trying to control what is said to them and how it is said, by eliciting re-phrasing, repetitions, simplifications, etc. This strengthens the claim that the quality of input is important, but weakens the idea that it only affects the unconscious acquisition process - my learners know what they are doing when they ask for clarification, as do Cohen and Hosenfeld's. Indeed, they also know when my talk ceases to be of any help to them, and have ways of dealing with me!

The fifth principle in Krashen's theory is the Affective Filter. This is essentially Earl Stevick's (1976) idea that there are defensive and receptive learners. Receptive learners do not have to learn/acquire as if through a barrier; defensive learners find the learning situation threatening and try to keep it at arm's length. Stevick's position on that was related to a 'whole person' view of education: people who found learning a new language threatening to their ego, their perception of themselves, would be literally on the defensive. While it is obviously an attractive notion, and relates to the concepts of empathy and ego-permeability (Henning, 1978) as

features of individual differences in learning, it is not clear how it relates to Krashen's other hypotheses. In particular, it is claimed to work only on input to the acquired system (1982, p 32), so that comprehensible input is used in a low anxiety situation, but there seems absolutely no reason for this restriction at all. Why shouldn't anxiety level in students also affect their conscious rule learning and the use of the Monitor? Especially the use of the Monitor?

The five hypotheses comprising the Monitor Model are currently, despite the criticisms and points which demand further research, the best elaborated theory of second language development we have. However, they do not seem to say very much about the movement towards 'humanistic' methods in language teaching (Stevick, 1980, and British Council, 1982), especially where those trends seem to involve the fifth of my major analogies of the language learning process this century. The idea of language learning's being more akin to personality development than to learning maths or geography or riding a bicycle has been popular in a minority for some time, promoted by Stevick in particular. The analogy involved is, of course, that between the teacher/pupil relationship and the therapist/client relationship. This is naturally a very deep issue, and several approaches have been sensibly rejected on the simple grounds that there is no single therapist/client relationship. However, Smith (1980) has an interesting chapter on learning in groups which seems to echo many of the claims of this minority group of language learning theorists. In particular, he stresses three processes which contribute to recognised personality change in therapy groups of various sorts: 1. security; 2. challenge; 3. self-disclosure.

Naturally, 3 is unlikely to occur profitably without 1, and 2 will be unsuccessful in promoting growth or learning without a background of 1. The relationship of self-disclosure to language learning is exploited in Moskowitz (1982). This field of thinking seems to aim at more than just Krashen's 'affective filter', since it argues that language learning is more than a kind of automatic skill acquisition but an extension and adaptation of the learner's personality. It is of course a strong position to hold, and is not supported by detailed research equivalent to the amount of work published on grammatical morphemes; but it has serious implications for affective and motivational variables in learning as well as for the kinds of teacher/pupil discourse that are productive and can be used for learning.

These theoretical models have all stimulated direct research in language learning, and as such have proved very useful. In some cases research has led to modifications of the theory, in others it has led to practical teaching suggestions. Some of the issues in a practical teaching situation, therefore, are very much clearer now than they were ten or fifteen years ago. For example, the importance

of the learner's own strategies for processing language for learning, as in Bialystok and Fröhlich's (1977) adaptation of Monitor theory, is now widely recognised. Similarly, the learner's strategies for getting language as discussed by Wong-Fillmore (1976), Tarone and Long could be seen in terms of Krashen's Input hypothesis as the learner's attempts to ensure that the language he/she pays attention to is as nearly comprehensible as he/she can manage. As a teacher I find this line of research particularly valuable as it seems to be a fruitful extension of this rather lonely search by the teacher for his or her own best 'teacher talk' from which the students can learn with maximum ease. The humanistic model promises some understanding of the dynamics of support and challenge in the classroom and this is more accessible to teachers as an idea than older conceptions of motivation by incentives and fear of failure: carrots and sticks. Despite the difficulty of translating those insights into classroom terms, which is very much a task for further research, they represent a fairly powerful resource which teachers need to be exploiting all the time. The individual difference research which has arisen out of other motivational enquiries and has been incorporated into the ideas of variable use of the 'monitor' and of the variable 'affective filter' gives a refreshing set of terms in which to discuss learners' variable achievement. Finally, despite what I have said earlier about the 'creative construction' idea, it at least represents an attempt to model a process which most teachers feels exists without being able to formulate it or to produce crucial evidence: the process by which the general level of proficiency of a learner seems to rise independently of the particular sequence of learning activities or items-to-be-learned presented by the course-book or teacher.

However, there seem to me to be several areas of psychological interest in the language classroom which are not treated by the theoretical approaches I have outlined. First among these is the experience which I see my learners having every year, without being able to explain it or even describe it properly. That is the 'take-off point', the point at which a learner seems to shift from learning (and forgetting) items of language in series to integrating all of what he or she remembers into an effective communicative instrument. It is the stage at which the learner feels confident, also, to embark upon a fruitful conversation. None of the theoretical approaches mentioned can specify the likely time-course of the developmental process, let alone the shape of the learning curve.

Another issue which is sorely in need of both empirical research and a proper theoretical treatment is the question of the relationship between language awareness in general and language learning. There is a distinct possibility that having a sensitivity to and a curiosity about language and how it works is a helpful attribute when learning a new one. Were it the case, then it might be advisable to try to develop it as part of the content of language teaching, as

indeed happens today in several of the language awareness courses conducted in schools. However, the theoretical approaches reviewed either reject such considerations out of hand or raise them, like Chastain's approach, to a level of conscious rule-writing which is equally inappropriate.

Thirdly, none of the approaches mentioned says anything very powerful about the transition between contexts of learning and contexts of use. This is a very old question - it used to be called transfer of training - and yet there is very little new psychological research on it. This is itself surprising, given that within the language teaching profession this question has stimulated a great deal of syllabus and materials development, particularly under the heading of 'languages for specific purposes'. A number of reasonable assumptions exist in that rather broad field about the proper relationship between learning tasks and the eventual context of language use, but their psychological implications remain largely untested.

In this paper I have tried to outline at a rather general level what seem to me to be the five main theoretical approaches to second language development currently under discussion. I have also tried to indicate which points in each are particularly controversial and which seem most in need of further clarifying research. I have also expressed my concern that, in at least three major areas, very practical questions which teachers have to consider for every course are given almost no illumination by these psychological theories and their associated empirical work. It should be evidence that each of the analogies employed - the rat, the information-processing device, the first language learner, the censor, and the therapist - falls short of providing a satisfactory account of the many-faceted activity of learning another language in the various contexts in which people do learn languages: alone, in the speech community, in the regular classroom, in a small group, or in an intensive course. New analogies will provide fresh impetus for understanding the basic processes.

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